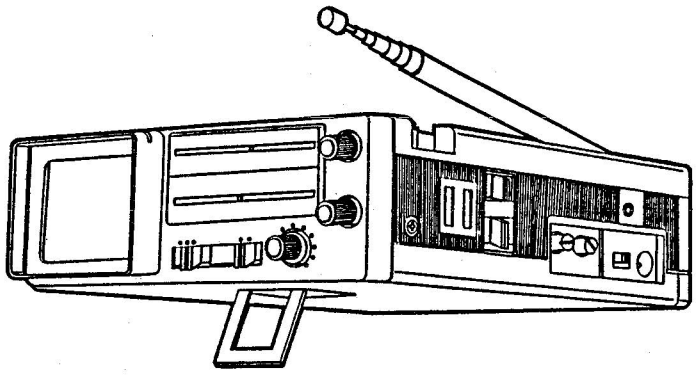
Service Manual

BLACK & WHITE TELEVISION RECEIVER

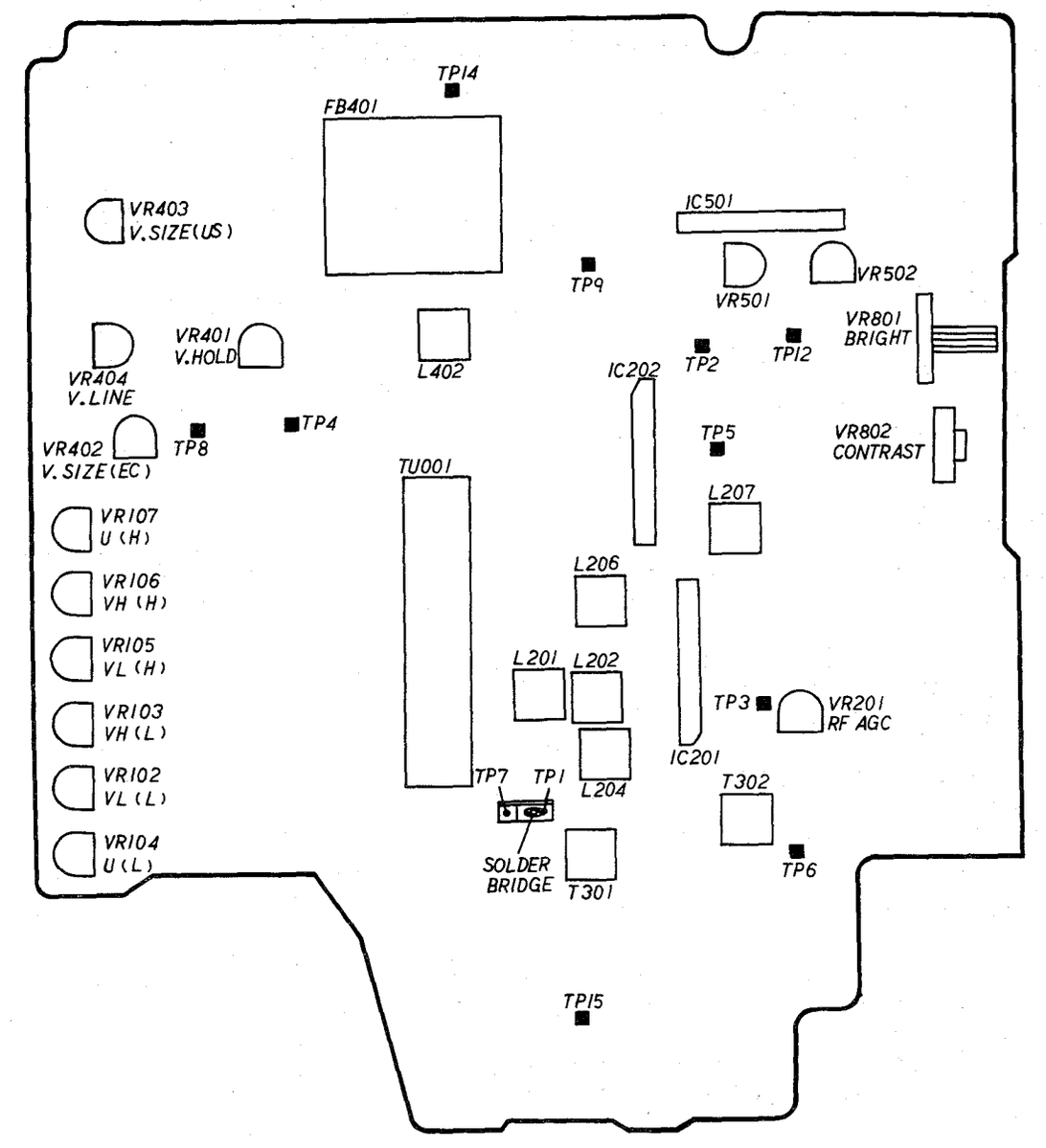
ORION

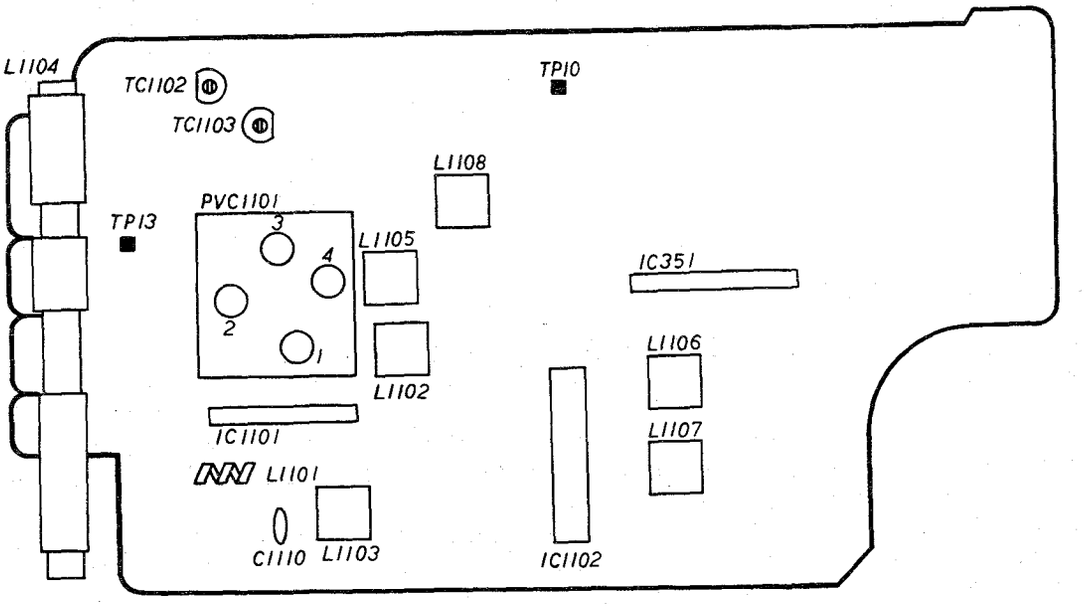
Model TVR-7120 Silber



Specifications are subject to change without notice.

CHASSIS LAYOUT





ALIGNMENT INSTRUCTIONS

PRECAUTION FOR RADIO ADJUSTMENT

Remove the top cabinet.
Switch on the main POWER and set the MW/UKW/KW selector switch to adequate position in the following adjustment items.

MW/UKW/KW ALIGNMENT

a) MW/UKW IF generator scope
b) Oscilloscope
c) S.S.V.M. (solid state voltmeter)
d) MW/UKW standard signal generator

MW IF ADJUSTMENT

1. Connect the hot of the input cable from the MW IF generator scope to TP10 and the ground lead to a known ground.
2. Connect the hot of the output cable from the MW IF generator scope to TC101-3 of PVC101 and the ground lead to known ground. (Refer to the alignment points)
3. Align the coil L106 until the peak of the wave indicates 455kHz Marker in the MW IF generator scope. (Refer to Fig.1)

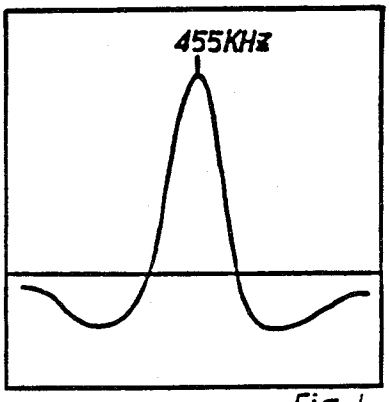


Fig. 1

UKW IF ADJUSTMENT

1. Connection of the input cable from the UKW IF generator scope is the same as in item MW IF ADJUSTMENT, 1.
2. Connect the hot of the output cable from the UKW IF generator scope to TP13 and the ground lead to a known ground. (Refer to chassis layout)
3. Adjustment the waveform as shown on Fig.2-1 with L103.
4. Let the waveform appear as shown in the right picture with L107 and then adjustment it to be symmeterical with a 10.7MHz center line. (Refer to Fig.2-2)

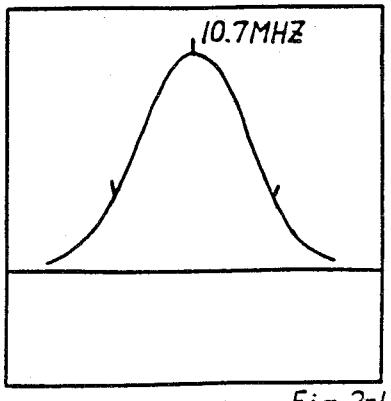


Fig. 2-1

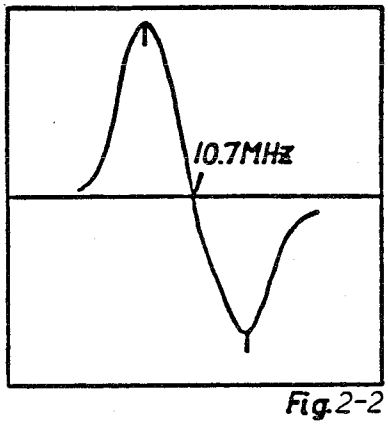
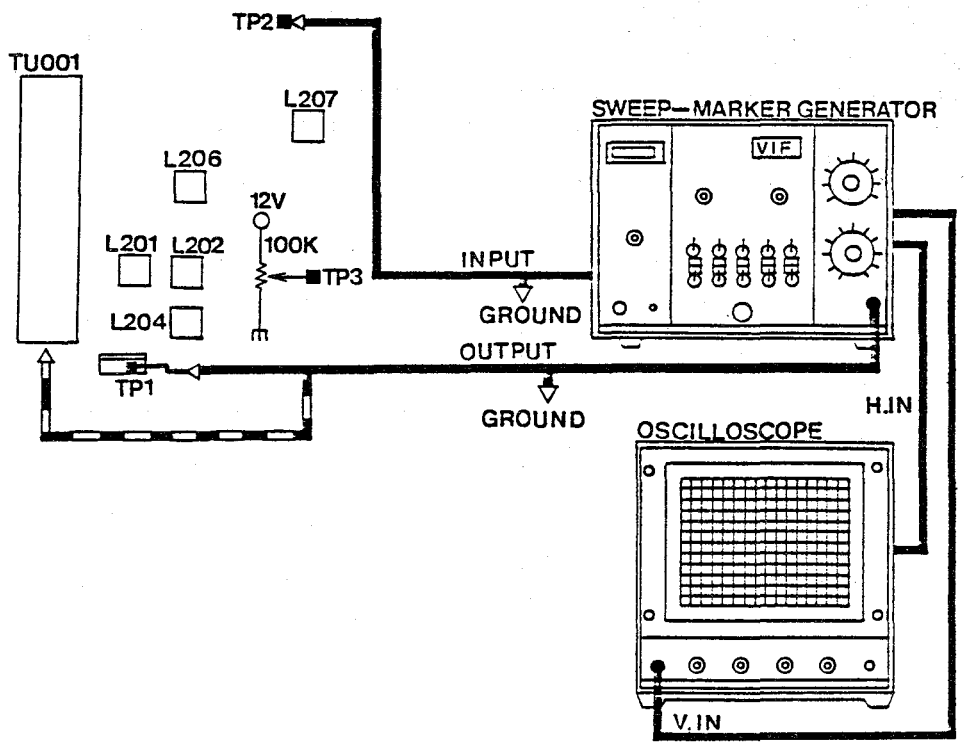


Fig. 2-2

MW COVERAGE ADJUSTMENT

1. Connect the oscilloscope and the S.S.V.M. to the earphone jack.
2. Send an output signal from the standard signal generator through loop antenna.
3. Turn the radio tuning knob fully counterclockwise to tune the output signal from the MW standard signal generator in to 515kHz and then adjust the signal for peak performance with L108.
4. Turn the radio tuning knob fully clockwise to tune the output signal from the MW standard signal generator in to 1650kHz and then adjust the signal for peak performance with TC101-4 of PVC101.

ALIGNMENT INSTRUCTIONS



VIDEO IF ALIGNMENT

Fig.8

SIF ADJUSTMENT

UK SOUND

1. Set the selector switch to UK position
2. Connect the output cable from the sweep/marker generator to TP5 and the input cable from it to TP6.
3. Adjust T301 so that the 6.0MHz matches Fig.9.
4. Adjust T302 so that the 6.0MHz marker is the center of the S curve. (Refer to Fig.10) (Make the waveform symmeterical with regard to center line.)

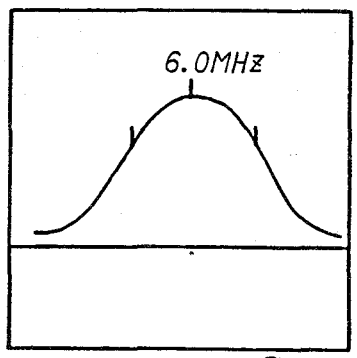


Fig.9

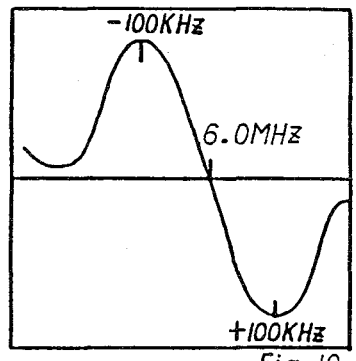


Fig.10

ALIGNMENT INSTRUCTIONS

EC SOUND
1. Set the selector switch to EC position
2. Connect the output cable from the sweep/marker generator to TP5 and the input cable from it to TP6.
3. Adjust VR304 so that the 5.5MHz watches Fig.11.
4. Adjust VR302 so that the 5.5MHz marker is the center of the S curve. (Refer to Fig.12)
   (Make the waveform symmeterical with regard to center line.)

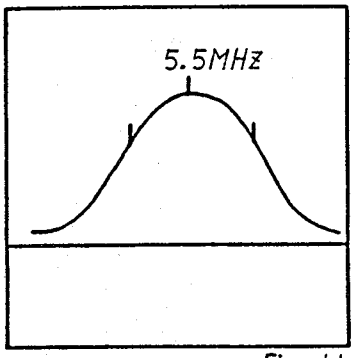


Fig. 11

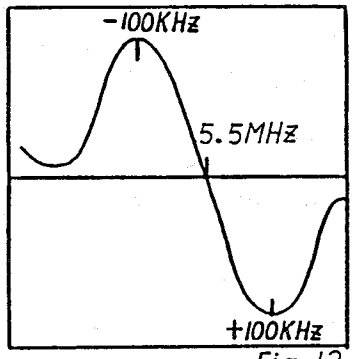


Fig. 12

US SOUND
1. Set the selector switch to US position
2. Connect the output cable from the sweep/marker generator to TP5 and the input cable from it to TP6.
3. Adjust VR303 so that the 4.5MHz watches Fig.13.
4. Adjust VR301 so that the 4.5MHz marker is the center of the S curve. (Refer to Fig.14)
   (Make the waveform symmeterical with regard to center line.)

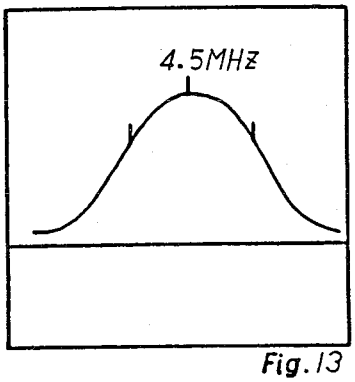


Fig. 13

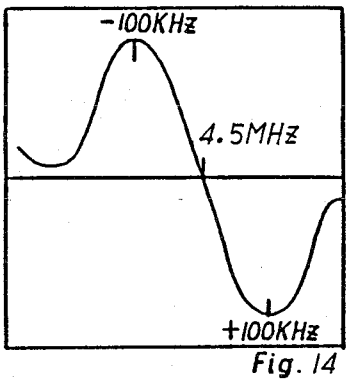


Fig. 14

ALIGNMENT INSTRUCTIONS

MW TRACKING ADJUSTMENT

1. Connection is the same as MW COVERAGE ADJUSTMENT.
2. Tune the MW standard signal generator with the radio tuning knob in to 600KHz and then adjust L104 with an adjustment tool for maximum output. (Drop wax on the core of the bar antenna after adjusting L104.)
3. Tune the MW standard signal generator in to 1400KHz and then adjust TC101-3 of PVC101 for maximum output which is sent when receiving with the radio tuning knob.
4. Repeat items 2 and 3 to obtain the best sensitivity at both points of 600kHz and 1400kHz.

UKW COVERAGE ADJUSTMENT

1. Connection is the same as MW COVERAGE ADJUSTMENT.
2. Connect output (75 ohm Cord) from the UKW standard generator to EXT. Antenna terminal.
3. Turn the radio tuning knob fully counterclockwise and then tune the output signal from the UKW standard signal generator to 87.5MHz and adjust L102 for maximum signal.
4. Turn the radio tuning knob fully clockwise and then tune the output signal from the UKW standard generator in to 109.5MHz and adjust TC101-2 of PVC101 for maximum output.
5. Repeat items 3 and 4.

UKW TRACKING ADJUSTMENT

1. Connection is the same as MW COVERAGE ADJUSTMENT.
2. Tune the MW standard signal generator in to 90MHz and then adjust L101 elastically for maximum output.
3. Tune the UKW standard signal generator in to 106MHz and then adjust TC101-1 of PVC101 for maximum output.
4. Repeat items 2 and 3 to obtain the best sensitivity at both points of 90MHz and 106MHz.

KW COVERAGE ADJUSTMENT

1. Connect the oscilloscope and the S.S.V.M. to the earphone jack.
2. Send an output signal from the standard signal generator through loop antenna.
3. Turn the radio tuning knob fully counterclockwise to tune the output signal from the KW standard signal generator in to 5.5MHz and then adjust the signal for peak performance with L105.
4. Turn the radio tuning knob fully clockwise to tune the output signal from the KW standard signal generator in to 18.5MHz and then adjust the signal for peak performance with TC103.
5. Repeat items 3 and 4.

KW TRACKING ADJUSTMENT

1. Connection is the same as MW COVERAGE ADJUSTMENT.
2. Tune the KW standard signal generator with the radio tuning knob in to 6.8MHz and then adjust L104 with an adjustment tool for maximum output. (Drop wax on the core of the bar antenna after adjusting L104.)
3. Tune the KW standard signal generator in to 14.5MHz and then adjust TC102 for maximum output which is sent when receiving with the radio tuning knob.
4. Repeat items 2 and 3 to obtain the best sensitivity at both points of 6.8MHz and 14.5MHz.

ALIGNMENT INSTRUCTIONS

PPRECAUTION FOR TV ADJUSTMENT

Remove the top cabinet.
Switch on the main power.

TV ALIGNMENT

a) VIF sweep/marker generator
b) SIF sweep/marker generator
c) Oscilloscope

VIF ADJUSTMENT

1. Turn T207 fully clockwise. (Take care not to break the core.)
2. Disconnect the solder bridge on TP1(CP201).
3. Connect AGC variable resistor between TP3, +B and earth ground. (Refer to Fig.7)
4. Connect the output cable of the sweep/marker generator to TP1(CP201) and the input cable of it to TP2.
5. Adjust L204 so that the sound trap is approx. P+1.5. (As shown in Fig.3)
6. Adjust L202 so that the sound trap is just like Fig.3.
7. Adjust L206 so that the bottom of the waveform matches P-2.4. (Refer to Fig.4)
8. Adjust L207 so that P is 25%. (Refer to Fig.5) (If P can't become 25%, repeat item 7.)
9. Connect TP1(CP201) (disconnected in item 2) by soldering it.
10. Connect the output from TP1 to Tuner pack TP.
11. Adjust the IFT coil L201 to increase the waveform size and P is 50% as shown in Fig.6.
12. Disconnect the AGC variable resistor.

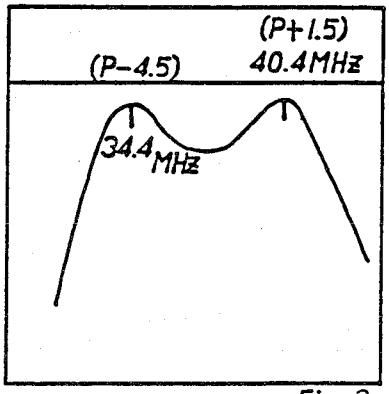


Fig.3

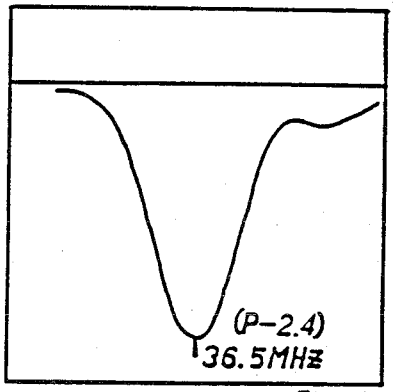


Fig.4

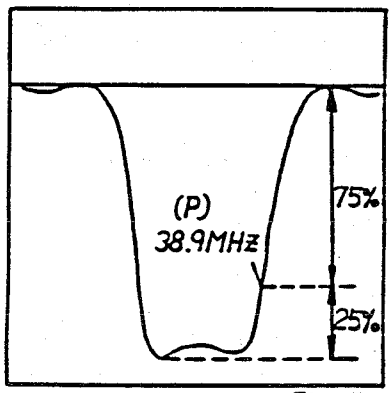


Fig.5

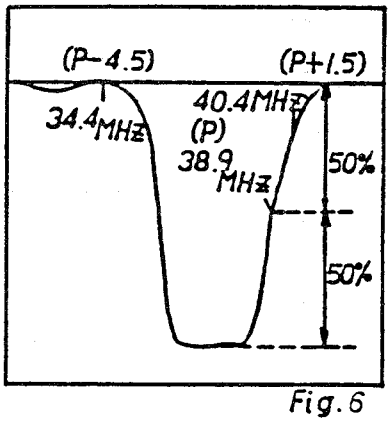
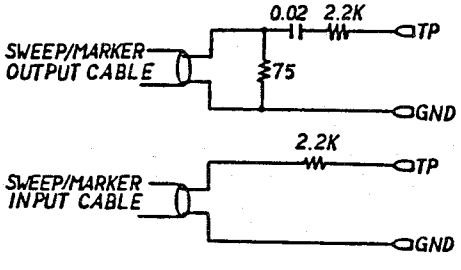


Fig.6



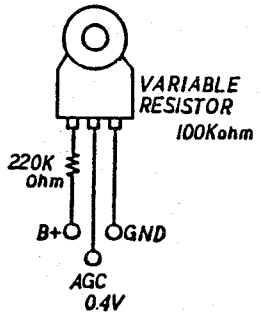


Fig.7

ALIGNMENT INSTRUCTIONS

TV COVERAGE ADJUSTMENT

Normally, this type of adjustment should not be required unless components have been replaced in the TV tuning circuitry.

VHF-L (EC Channel 2 through 4) Carefully tune in the highest received channel in this band. If the channel number on the dial is not so close to the indicator marker, adjust VR105 so that the highest tuning margin point and the marker position are synchronous. Carefully tune in the lowest received channel in this band. If this channel number on the dial is not so close to the indicator marker, adjust VR102 so that the lowest tuning margin point and the marker position are syncronous. Then, carefully tune in all received channels in this band and check for proper dial calibration. It may be necessary to readjust VR105 and VR102 to obtain optimum results.

VHF-H (EC Channel 5 through 12) Proceed in the same manner as discribed for VHF-L, except adjust VR106 for high end and VR103 for low end calibrations.

UHF (EC Channel 21 through 69) Proceed in the same manner as discrebed for VHF-L, except adjust VR107 for high end and VR104 for low end calibrations.

* Check if the TV receives US Channel VHF-L-6ch and US Channel UHF-83ch.

RF AGC ADJUSTMENT

The RF AGC control (VR201) rarely requires re-adjustment unless the received picture exhibits excessive snow or the TV receiver lacks sensitivity. Field adjustment can be made by tuning in a weak snowy station and adjusting VR201 for the least amount of snow.

1. Connect a test pattern (80dB).
2. Adjust the voltage of TP7 to 1.8V with VR201.

VERTICAL HEIGHT AND LINEARITY ADJUSTMENT

Adjust VR402 and VR404 with test pattern generator for correct size and linearity.

VERTICAL HOLD ADJUSTMENT

1. Connect Receiver to test pattern signal (60dB).
2. Adjust VR401 for a voltage of -0.3V at TP4. (EC Position)

HORIZONTAL HOLD ADJUSTMENT

1. Connect Receiver to test pattern signal (60dB).
2. Adjust the voltage on TP9 to 0.15V with L402. (EC Position)

+B ADJUSTMENT

1. Adjust the voltage on TP12 to 5.85V, when giving 9V to the DC Jack, with VR502. (Make this adjustment after operating the unit for a few minutes.)
2. Adjust the voltage on TP12 to 5.7V, when giving 6V to the DC Jack, with VR501.

ALIGNMENT INSTRUCTIONS

YOKE POSITION ADJUSTMENT

To adjust the yoke and to correct for picture tilt, loosen the clamp of the yoke holding screw. Adjust for the correct tilt and retighten the screw.

CENTERING ADJUSTMENT

Adjust two magnet rings located on the deflection yoke rear cover so that picture is on the middle of CRT.
(Refer to Fig.15)

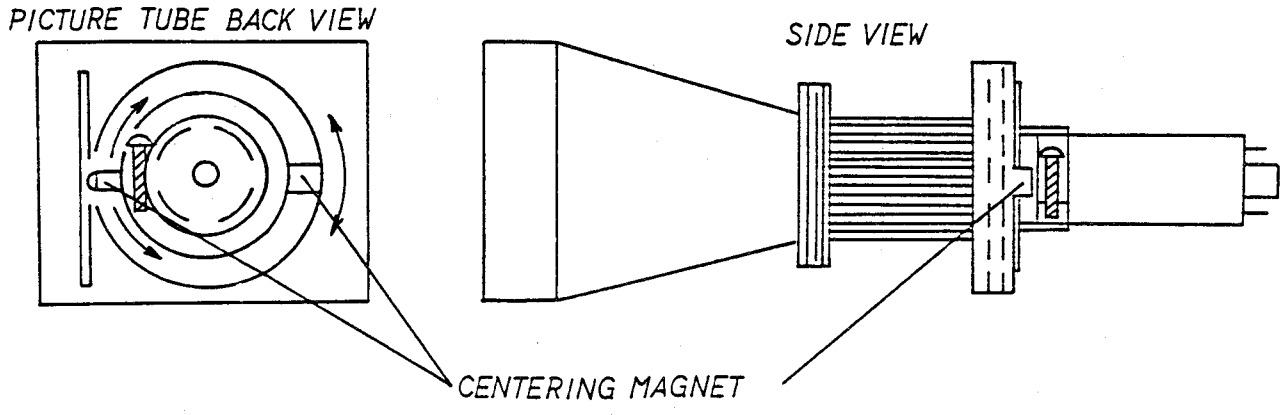
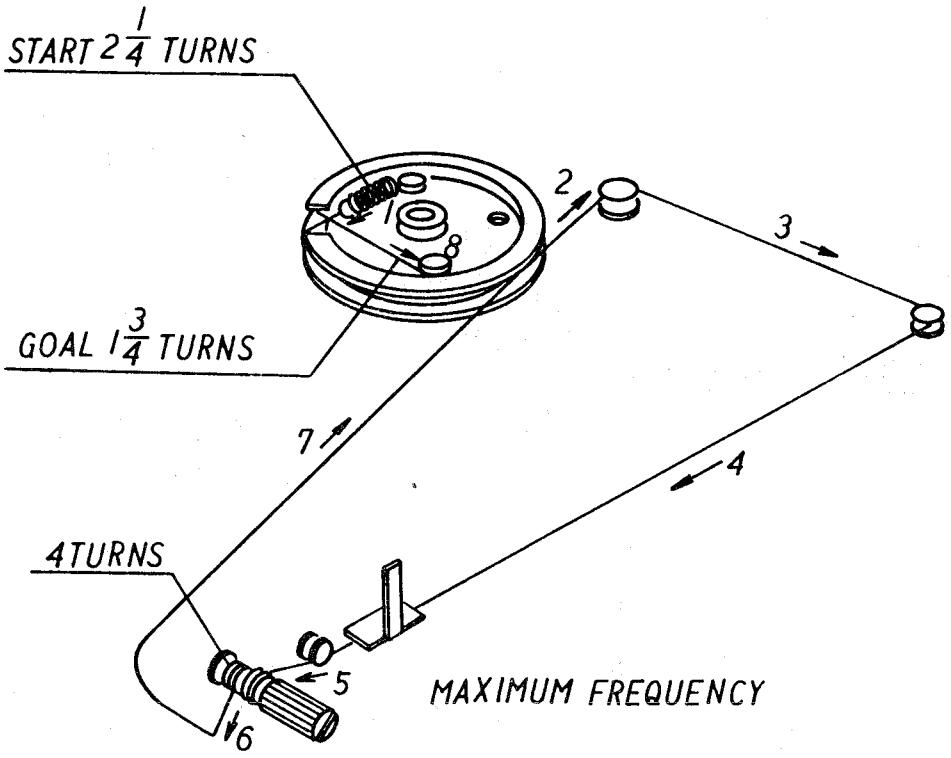


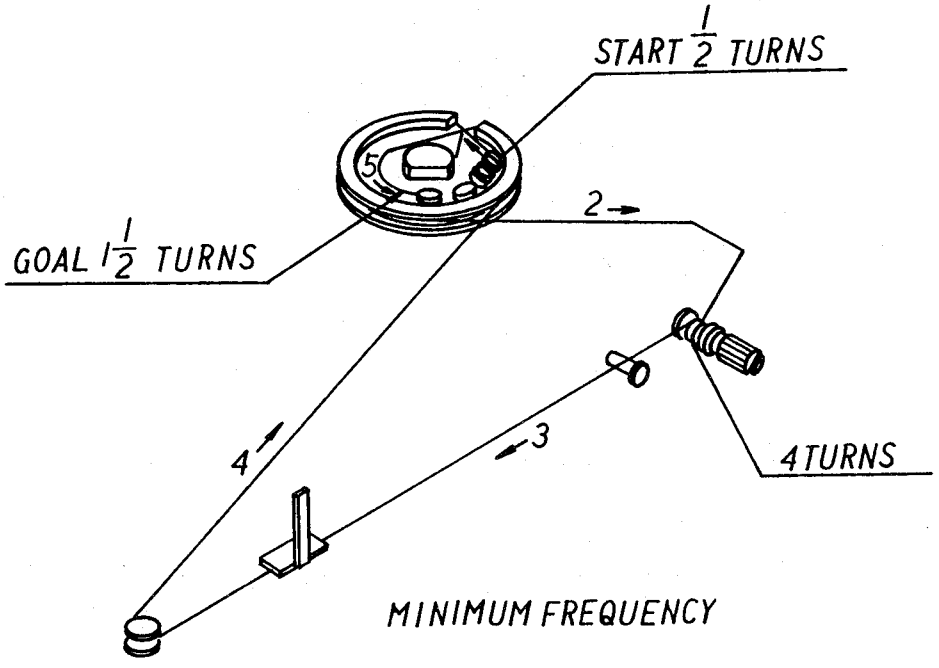
Fig.15

TV DIAL CORD STRINGING DIAGRAM



M323-11
4-2278

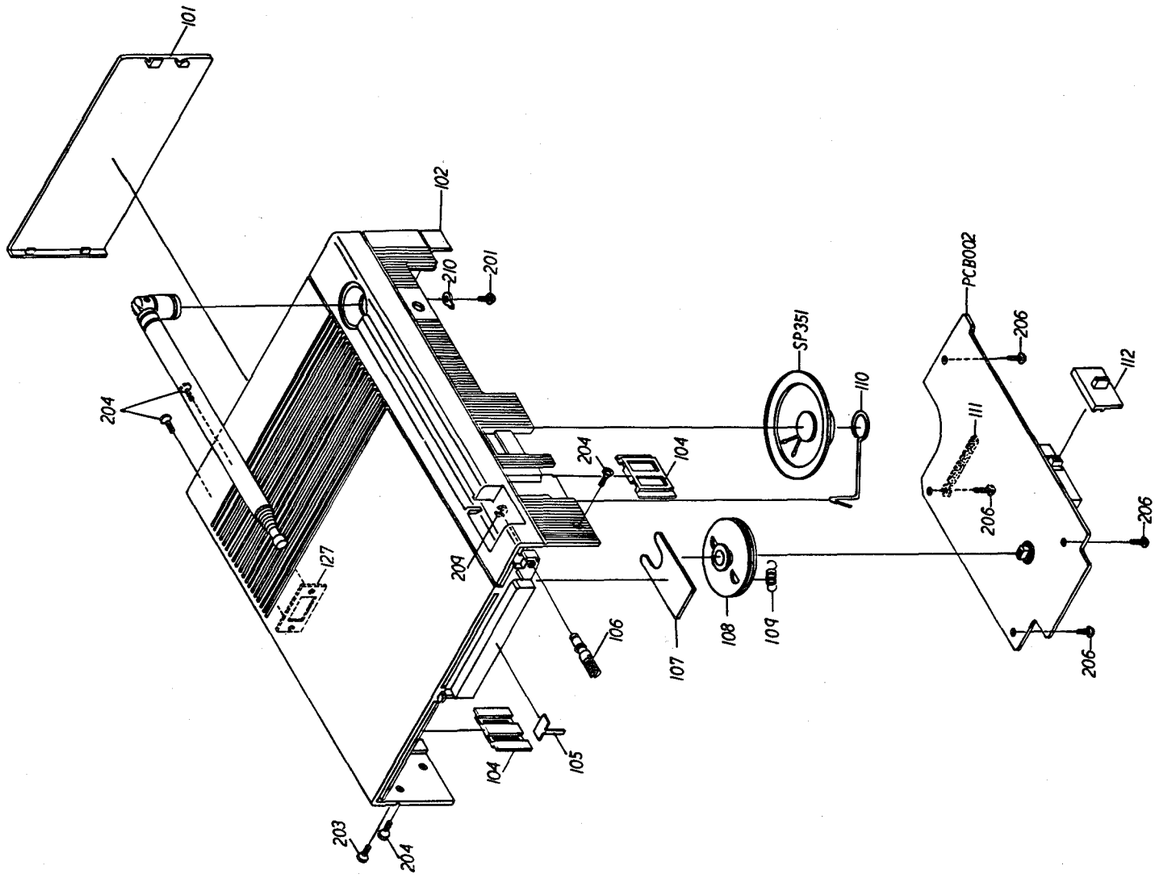
RADIO DIAL CORD STRINGING DIAGRAM

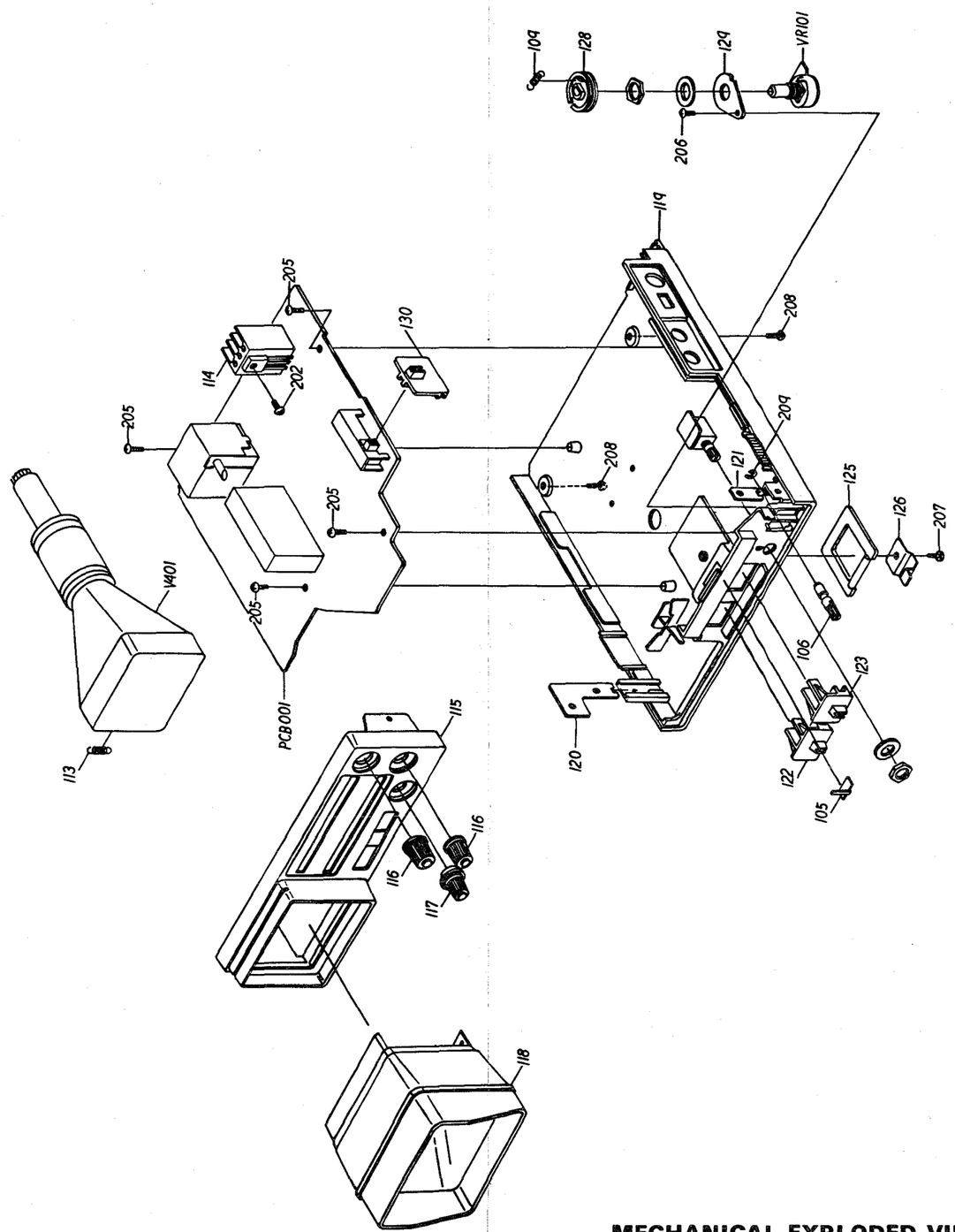


MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
101	703KPB0001	Battery Cover	
	800JF00040	Tape	3x104x0.5t
	800JF00071	Cushion, Battery	
102	702KPB0015	Cabinet, Top	
	7230001073	Plate, Selector	
	7240000230	Sheet, Rechageable Battery	
	7290000083	Sheet, Decoration	
	773KKE0003	Spring, Battery	
	773KSE0001	Plate, Battery	
	800JF00044	FC Sheet	8x19x13t
	800JQ00004	Sheet	5x10x0.5t
	800JM00006	Cushion	20x45x2t
	800JQ00030	Tape	50ϕ
	82A1660051	Washer	1.7x6x0.5t
	82A2675051	Washer	2.6x7.5x0.5t
	8927001000	Pulley	2.1x3x5
	8927003000	Pulley	3.2x5x7.9
	9050070000	Eyelet	No.11
104	709JEE0002	Metal, Strap Fixing	
105	873KSB0007	Pointer	
	874KPA0002	Holder, Pointer	
106	781KAA0001	Shaft, Tuning	
107	872KPA0003	Plate, Dial Drum	
108	871KPA0010	Radio Dial Drum	
109	741KKA0008	TV Spring	
110	749KKA0002	Speaker Spring	
111	899PEC0340	Cord Clamp	
112	733KPE0004	Knob, Slide Switch (4)	
113	741KKA0009	C.R.T. Earth Spring	
114	763JAA0056	Heat Sink	
115	701KPJ0042	Front Panel	
	713KPA0017	C.R.T. Cover	
	7210000139	Plate, Dial Scale	
	800JF00070	Cushion, DY Coil	
116	723KPE0001	Knob, Tuning	
117	723KPE0002	Knob, Volume	
118	713KPB0001	Hood Lens	
	713JNA0002	Lens	
	713KPB0008	Hood TV	
119	701KPD0023	Cabinet, Bottom	
	7220000138	Sheet, Date	
	7222020259	Sheet, Rating	
	755JBA0021	Sheet	35x35
	7290000083	Sheet, Decoration	
	800JF00038	FC Sheet	8x10x5t
	800JF00042	Cushion	20x45x2t
	82A1660051	Washer	1.7x6x0.5t
	8927001000	Pulley	2.1x3x5
120	761KSA0076	Metal, Cabinet Fixing (2)	
	800JF00041	FC Sheet	10x16x6t

REF. NO.	PART NO.	DESCRIPTION	
121	761KSA0075	Metal, Cabinet Fixing (1)	
122	733KPE0002	Knob, Slide Switch (2)	
123	733KPE0001	Knob, Slide Switch (1)	
124	752KSA0050	Plate, Shield	
125	704JEE0002	Rubber, Bottom Cabinet	
126	709KEB0001	Angle, Fixing Leg	
127	761KSA0077	Metal, Connector Fixing	
128	871KPA0011	Drum, Dial	
129	761KSA0073	Metal, TV Volume Fixing	
130	733KPE0003	Knob, Slide Switch (3)	
201	810B130801	Screw, Sems B	M3x8
202	8102130804	Screw, Pan	M3x8
203	8102326601	Screw, Flat	2.6x6
204	8102326801	Screw, Flat	2.6x8
205	8110630604	Screw, Tap Tite (P)	3x6
206	8110630804	Screw, Tap Tite (P)	3x8
207	8117126501	Screw, Tapping B Pan	2.6x5
208	8117130A01	Screw, Tapping B Pan	3x10
209	83ETW25001	E-Ring	2.5ϕ
210	901B040000	Earth Lug	3.2ϕ
-	7222020258	Plate, AC Adapter	
-	7240000247	Fuse, Label	
-	777KPA0002	Bar Antenna Holder	
-	791KHA0035	Poly Bag	
-	791KHA0036	Poly Bag	150x240x0.03t
-	791KHA0037	Poly Bag	100x200x0.03t
-	792KHA0064	Package, Top	
-	792KHA0065	Package, Bottom	
-	793KCD0185	Gift Box	
-	794JEE0001	Metal, Strap (1)	
-	794JEE0002	Metal, Strap (2)	
-	794JLA0006	Vinyl Case, Hood	
-	794JLA0013	Carring Vinyl, Case	
-	794JLA0007	Strap	
-	800KF00036	FC Sheet	20ϕ x1.5t
-	800JF00098	FC Sheet	13x19x8t
-	8995167000	Band, Cord Clamp	

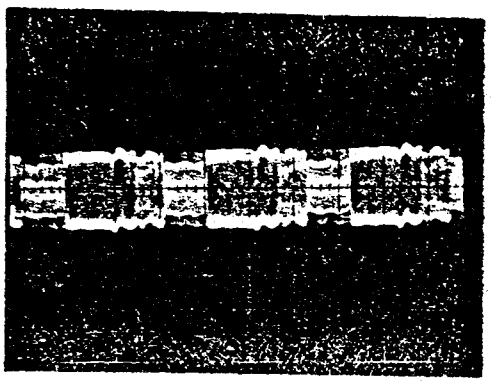




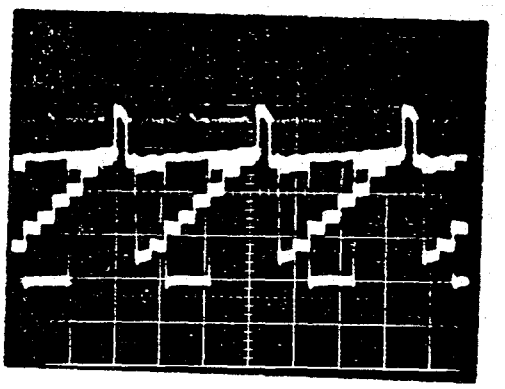
MECHANICAL EXPLODED VIEW

M323-11
1-3516

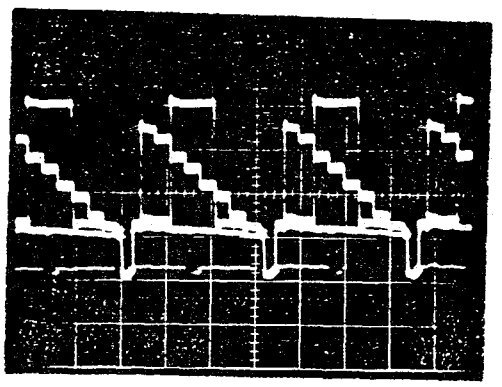
CHASSIS WAVEFORMS



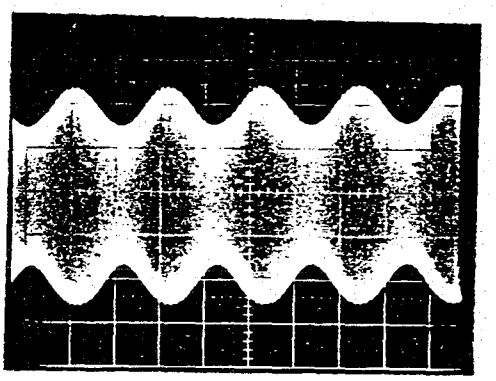
1 0.1Vp-p (H)



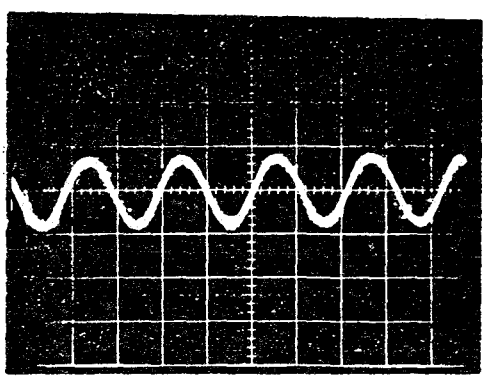
2 0.84Vp-p (H)



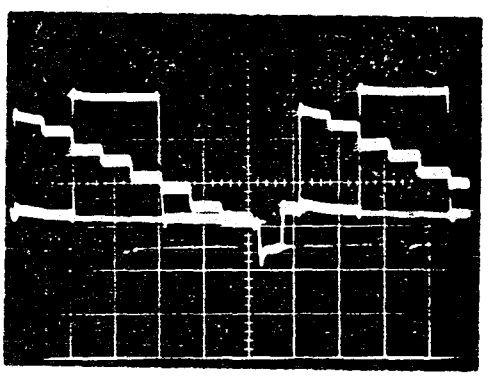
3 0.84Vp-p (H)



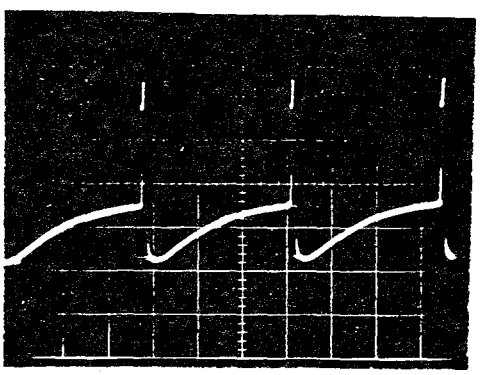
4 0.25Vp-p



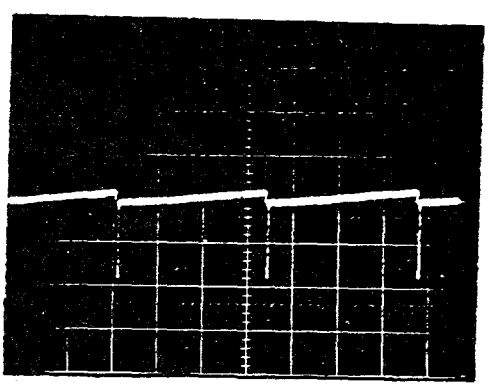
5 0.08Vp-p



6 0.84Vp-p

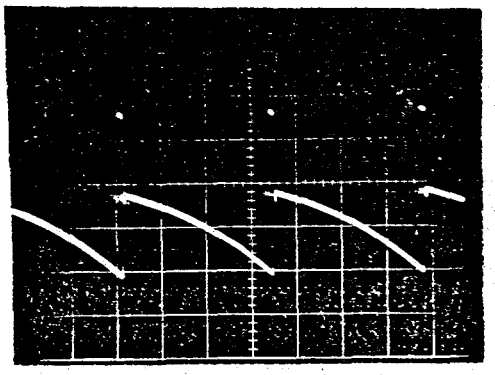


7 2.1Vp-p (V)

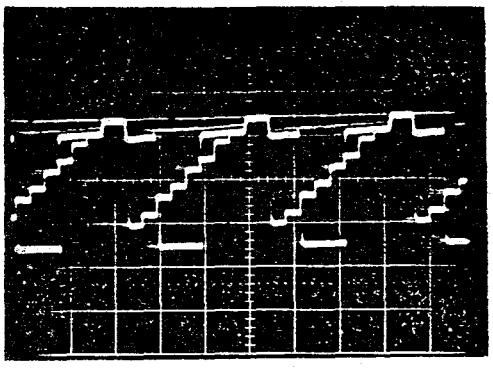


8 0.4Vp-p (V)

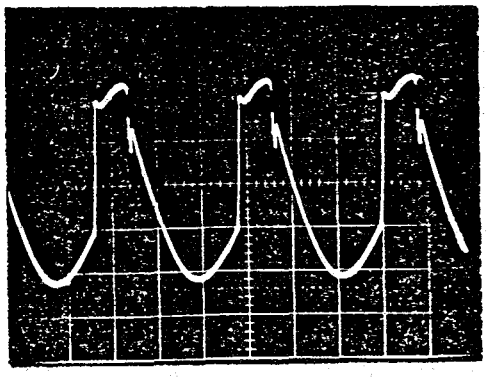
M323-11
4-2255



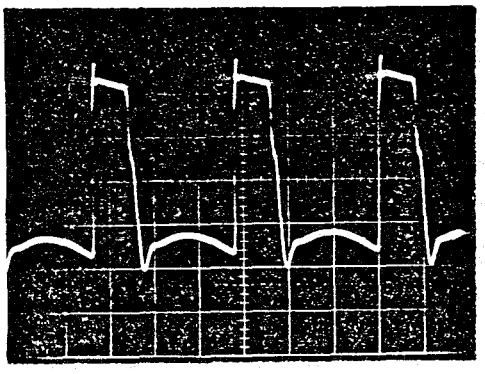
9 7.6Vp-p (V)



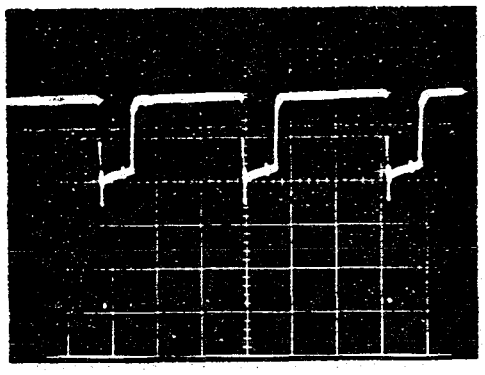
10 30Vp-p (H)



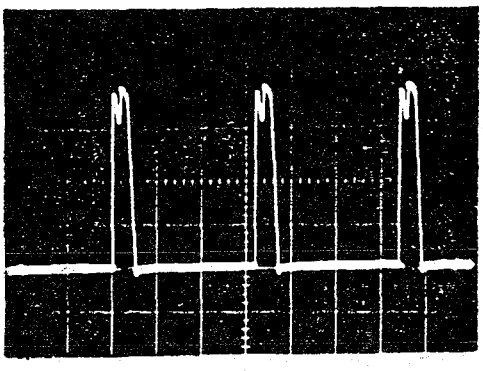
11 9.2Vp-p (H)



12 0.96Vp-p (H)



13 5.2Vp-p (H)



14 44Vp-p (H)

M323-11
4-2256

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION	
		-RESISTORS-	
R101	R021T4681J	RC RD25ST681J	680 OHM 1/4W
R102	R021T6392J	RC RD16STJ392	3.9K OHM 1/6W
R103	R021T4181J	RC RD25ST181J	180 OHM 1/4W
R104	R021T4331J	RC RD25ST331J	330 OHM 1/4W
R105	R021T4181J	RC RD25ST181J	180 OHM 1/4W
R106	R021T4333J	RC RD25ST333J	33K OHM 1/4W
R107	R021T4683J	RC RD25ST683J	68K OHM 1/4W
R108	R021T4223J	RC RD25ST223J	22K OHM 1/4W
R201	R021T4102J	RC RD25ST102J	1K OHM 1/4W
R202	R021T6680J	RC RD16STJ680	68 OHM 1/6W
R203	R021T6331J	RC RD16STJ331	330 OHM 1/6W
R205	R021T6473J	RC RD16STJ473	47K OHM 1/6W
R206	R021T4333J	RC RD25ST333J	33K OHM 1/4W
R207	R021T6223J	RC RD16STJ223	22K OHM 1/6W
R208	R021T6103J	RC RD16STJ103	10K OHM 1/6W
R209	R021T6563J	RC RD16STJ563	56K OHM 1/6W
R210	R021T6104J	RC RD16STJ104	100K OHM 1/6W
R211	R021T6183J	RC RD16STJ183	18K OHM 1/6W
R212	R021T6224J	RC RD16STJ224	220K OHM 1/6W
R213	R021T6472J	RC RD16STJ472	4.7K OHM 1/6W
R214	R021T6393J	RC RD16STJ393	39K OHM 1/6W
R215	R021T4100J	RC RD25ST100J	10 OHM 1/4W
R216	R021T6183J	RC RD16STJ183	18K OHM 1/6W
R217	R021T6272J	RC RD16STJ272	2.7K OHM 1/6W
R301	R021T6562J	RC RD16STJ562	5.6K OHM 1/6W
R302	R021T6223J	RC RD16STJ223	22K OHM 1/6W
R303	R021T6154J	RC RD16STJ154	150K OHM 1/6W
R304	R021T4183J	RC RD25ST183J	18K OHM 1/4W
R305	R021T4101J	RC RD25ST101J	100 OHM 1/4W
R306	R021T6104J	RC RD16STJ104	100K OHM 1/6W
R307	R021T6154J	RC RD16STJ154	150K OHM 1/6W
R308	R021T6154J	RC RD16STJ154	150K OHM 1/6W
R309	R021T6104J	RC RD16STJ104	100K OHM 1/6W
R311	R021T6561J	RC RD16STJ561	560 OHM 1/6W
R312	R021T6220J	RC RD16STJ220	22 OHM 1/6W
R313	R021T6681J	RC RD16STJ681	680 OHM 1/6W
R314	R021T6220J	RC RD16STJ220	22 OHM 1/6W
R315	R02124563J	RC RD25U563J	56K OHM 1/4W
R351	R021T6101J	RC RD16STJ101	100 OHM 1/6W
R352	R011T2100J	RC ERD-50TJ100T	10 OHM 1/2W
R401	R021T6331J	RC RD16STJ331	330 OHM 1/6W
R402	R021T6152J	RC RD16STJ152	1.5K OHM 1/6W
R403	R021T6563J	RC RD16STJ563	56K OHM 1/6W
R404	R021T6154J	RC RD16STJ154	150K OHM 1/6W
R405	R021T6561J	RC RD16STJ561	560 OHM 1/6W
R406	R021T4472J	RC RD25ST472J	4.7K OHM 1/4W
R407	R021T4392J	RC RD25ST392J	3.9K OHM 1/4W
R408	R021T6683J	RC RD16STJ683	68K OHM 1/6W
R409	R021T6393J	RC RD16STJ393	39K OHM 1/6W
R410	R021T6562J	RC RD16STJ562	5.6K OHM 1/6W
R411	R021T6391J	RC RD16STJ391	390 OHM 1/6W
R412	R021T6273J	RC RD16STJ273	27K OHM 1/6W
R413	R021T6122J	RC RD16STJ122	1.2K OHM 1/6W
R414	R021T6100J	RC RD16STJ100	10 OHM 1/6W
R415	R012T2390J	RC ERD-S1TJ390T	39 OHM 1/2W
R416	R021T6223J	RC RD16STJ223	22K OHM 1/6W
R417	R021T6103J	RC RD16STJ103	10K OHM 1/6W
R418	R021T6102J	RC RD16STJ102	1K OHM 1/6W
R419	R021T4561J	RC RD25ST561J	560 OHM 1/4W
R420	R021T4562J	RC RD25ST562J	5.6K OHM 1/4W
R421	R021T48R2J	RC RD25ST8R2J	8.2 OHM 1/4W
R422	R021T64R7J	RC RD16STJ4R7	4.7 OHM 1/6W
R423	R021T6121J	RC RD16STJ121	120 OHM 1/6W
R424	R021T6123J	RC RD16STJ123	12K OHM 1/6W
R425	R021T6123J	RC RD16STJ123	12K OHM 1/6W
R426	R021T42R2J	RC RD25ST2R2J	2.2 OHM 1/4W
R427	R021T6103J	RC RD16STJ103	10K OHM 1/6W
R428	R021T6682J	RC RD16STJ682	6.8K OHM 1/6W
R429	R021T4122J	RC RD25ST122J	1.2K OHM 1/4W
R430	R021T6152J	RC RD16STJ152	1.5K OHM 1/6W
R431	R021T6471J	RC RD16STJ471	470 OHM 1/6W
R432	R021T6392J	RC RD16STJ392	3.9K OHM 1/6W
R433	R021T6273J	RC RD16STJ273	27K OHM 1/6W
R434	R021T6182J	RC RD16STJ182	1.8K OHM 1/6W
R435	R021T6680J	RC RD16STJ680	68 OHM 1/6W
R436	R021T65R6J	RC RD16STJ5R6	5.6 OHM 1/6W
R437	R021T6101J	RC RD16STJ101	100 OHM 1/6W
R438	R021T6820J	RC RD16STJ820	82 OHM 1/6W
R439	R021T6470J	RC RD16STJ470	47 OHM 1/6W
R440	R021T4100J	RC RD25ST100J	10 OHM 1/4W
R441	R021T4102J	RC RD25ST102J	1K OHM 1/4W
R442	R021T4010J	RC RD25ST010J	1 OHM 1/4W
R501	R021T4121J	RC RD25ST121J	120 OHM 1/4W
R502	R021T4121J	RC RD25ST121J	120 OHM 1/4W

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO		DESCRIPTION	
			-RESISTORS (CONT)-	
R503	R021T4121J	RC	RD25ST121J	120 OHM 1/4W
R504	R021T4121J	RC	RD25ST121J	120 OHM 1/4W
R508	R012T2101J	RC	ERD-S1TJ101T	100 OHM 1/2W
R801	R021T6184J	RC	RD16STJ184	180K OHM 1/6W
R802	R021T6101J	RC	RD16STJ101	100 OHM 1/6W
R803	R021T6103J	RC	RD16STJ103	10K OHM 1/6W
R804	R021T6122J	RC	RD16STJ122	1.2K OHM 1/6W
R805	R021T6181J	RC	RD16STJ181	180 OHM 1/6W
R806	R021T6103J	RC	RD16STJ103	10K OHM 1/6W
R807	R021T4335J	RC	RD25ST335J	3.3M OHM 1/4W
R808	R021T6152J	RC	RD16STJ152	1.5K OHM 1/6W
R1101	R021T6331J	RC	RD16STJ331	330 OHM 1/6W
R1102	R021T4330J	RC	RD25ST330J	33 OHM 1/4W
R1103	R021T6331J	RC	RD16STJ331	330 OHM 1/6W
R1104	R021T4221J	RC	RD25ST221J	220 OHM 1/4W
R1105	R021T6393J	RC	RD16STJ393	39K OHM 1/6W
R1106	R021T6101J	RC	RD16STJ101	100 OHM 1/6W
R1107	R021T6331J	RC	RD16STJ331	330 OHM 1/6W
R1108	R021T6123J	RC	RD16STJ123	12K OHM 1/6W
R1109	R021T6153J	RC	RD16STJ153	15K OHM 1/6W
R1110	R021T6331J	RC	RD16STJ331	330 OHM 1/6W
R1111	R021T6182J	RC	RD16STJ182	1.8K OHM 1/6W
R1112	R021T6100J	RC	RD16STJ100	10 OHM 1/6W
R1113	R021T4224J	RC	RD25ST224J	220K OHM 1/4W
R1114	R021T4104J	RC	RD25ST104J	100K OHM 1/4W
R1115	R021T6224J	RC	RD16STJ224	220K OHM 1/6W
R1116	R021T6124J	RC	RD16STJ124	120K OHM 1/6W
R1117	R021T4101J	RC	RD25ST101J	100 OHM 1/4W
R1118	R021T6471J	RC	RD16STJ471	470 OHM 1/6W
R1120	R021T4220J	RC	RD25ST220J	22 OHM 1/4W
R1124	R021T6470J	RC	RD16STJ470	47 OHM 1/6W
R1126	R021T6822J	RC	RD16STJ822	8.2K OHM 1/6W
R1127	R021T4222J	RC	RD25ST222J	2.2K OHM 1/4W
R1128	R021T6562J	RC	RD16STJ562	5.6K OHM 1/6W
			-CAPACITORS-	
C101	E011T5100M	CE	ECEA1HS100B	10UF50V
C102	E021T5010M	CE	50TWMS010MTA	1 UF 50V
C103	C02TB0413K	CC	RTHE50SJYB102K	0.001 UF B
C104	C02TF0414Z	CC	RTHE70SJYF103Z	0.01 UF F
C105	E011T5100M	CE	ECEA1HS100B	10UF50V
C106	E011T5100M	CE	ECEA1HS100B	10UF50V
C107	E011T5100M	CE	ECEA1HS100B	10UF50V
C201	CG4TRH4B1J	CC	UP100RH120JA	12 PF 50V
C202	C0B0RK420D	CC	2PF 50V RK	DD330RK020D50V
C203	C0B0RK420D	CC	2PF 50V RK	DD330RK020D50V
C204	C0B0SL4Z0D	CC	0.5PF 50V SL	DD330SL0R5D50V
C205	C0B0RJ430D	CC	3PF 50V RJ	DD330RJ030D50V
C206	E0B101470M	CE	10TWMS470M	47 UF 10V
C207	C0B0RH460D	CC	6PF 50V RH	DD330RH060D50V
C208	C02TF0414Z	CC	RTHE70SJYF103Z	0.01 UF F
C209	C0B0F0444Z	CC	0.04UF 50V F	DD310F0403Z50V
C210	C0B0F0444Z	CC	0.04UF 50V F	DD310F0403Z50V
C211	C0B0RK420D	CC	2PF 50V RK	DD330RK020D50V
C212	C0B0RK420D	CC	2PF 50V RK	DD330RK020D50V
C213	C0B0RJ430D	CC	3PF 50V RJ	DD330RJ030D50V
C214	C0B0RK420D	CC	2PF 50V RK	DD330RK020D50V
C215	C02TF0413Z	CC	RTHE40SJYF102Z	0.001 UF F
C216	C02TF0414Z	CC	RTHE70SJYF103Z	0.01 UF F
C217	E0B701101M	CE	10TWSS101M	100 UF 10V
C218	C02TF0413Z	CC	RTHE40SJYF102Z	0.001 UF F
C219	E012T54R7M	CE	ECEA1CSS4R7B	4.7 UF 50 V
C220	C02TF0414Z	CC	RTHE70SJYF103Z	0.01 UF F
C221	E0B701101M	CE	10TWSS101M	100 UF 10V
C222	E012T54R7M	CE	ECEA1CSS4R7B	4.7 UF 50 V
C223	C02TF0414Z	CC	RTHE70SJYF103Z	0.01 UF F
C301	C02TZF4Q4Z	CC	RTHE10SJZF473Z	0.047 UF
C302	C02TB0413K	CC	RTHE50SJYB102K	0.001 UF B
C303	C02TB0413K	CC	RTHE50SJYB102K	0.001 UF B
C304	C0B0RH460D	CC	6PF 50V RH	DD330RH060D50V
C305	C0B0CH480D	CC	DD340CH080D50V	8 PF 50V NP0
C306	C02TF04H4Z	CC	RTHE90SJYF223Z	0.022 UF ZF
C307	C02TF0413Z	CC	RTHE40SJYF102Z	0.001 UF F
C308	E021T1470M	CE	10TWMS470MTA	47 UF 10V
C309	P133T0333J	CPP	AMZV50V333J	0.033 UF 50V
C310	P133T0563J	CPP	AMZV50V563J	0.056 UF 50V
C311	C02TB0413K	CC	RTHE50SJYB102K	0.001 UF B
C312	C0B0B0413K	CC	DD04000YB102K2	0.001 UF 50V YB
C313	C0B0RH4B1K	CC	12PF 50V F	DD340RH120K50V
C314	C0B0CH4N1K	CC	DD03000CH390K2	39 PF 50V NP0
C351	C02TSL4S2K	CC	RTHE95SJSL561K	560 PF SL
C352	E021T1221M	CE	10TWMS221MTA	220 UF 10V
C353	E021T1221M	CE	10TWMS221MTA	220 UF 10V
C354	E012T1470M	CE	ECEA1ASS470B	47 UF 10 V

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION
		-CAPACITORS (CONT)-
C355	E021T52R2M	CE 50TWMS2R2MTA 2.2 UF 50V
C356	E012T5010M	CE ECEA1CSS010B 1 UF 50 V
C357	E012T1101M	CE ECEA1ASS101B 100 UF 10 V
C401	P133T0223J	CPP AMZV50V223J 0.022 UF 50V
C402	E0B105010M	CE 50TWMS010M 1 UF 50V
C403	P133T0473J	CPP AMZV50V473J 0.047 UF 50V
C404	P13300473J	CPP AMZ 50V473J 0.047 UF 50V
C405	P13300273J	CPP AMZ 50V273J 0.027 UF 50V
C406	E251T2100M	CTANTAL DN1C100MIS 10 UF 16V
C407	E251T2100M	CTANTAL DN1C100MIS 10 UF 16V
C408	E011T2330M	CE ECEA1CS330B 33 UF 16 V
C409	C02TF0413Z	CC RTHE40SJYF102Z 0.001 UF F
C410	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C411	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C412	C02TF0413Z	CC RTHE40SJYF102Z 0.001 UF F
C413	E027T5100M	CE 50TWSS100MTA 10 UF 50V
C414	P133T0563J	CPP AMZV50V563J 0.056 UF 50V
C415	P133T0682J	CPP AMZV50V682J 0.0068 UF 50V
C416	P133T0682J	CPP AMZV50V682J 0.0068 UF 50V
C417	E021T5010M	CE 50TWMS010MTA 1 UF 50V
C418	P13300393J	CPP AMZ 50V393J 0.039 UF 50V
C419	E251T43R3K	CTANTAL DN1V3R3KIS 3.3 UF 35V
C420	P133T0103J	CPP AMZV50V103J 0.01 UF 50V
C421	P133F0222J	CPP AMZD50V222J 0.0022 UF 50V
C422	P133T0562J	CPP AMZV50V562J 0.0056 UF 50V
C423	P133T0563J	CPP AMZV50V563J 0.056 UF 50V
C424	E0B701221M	CE 10TWSS221M 220 UF 10V
C426	C0B0F0413Z	CC 0.001UF 50V F DD330F0102Z50V
C427	P133F0153J	CPP AMZD50V153J 0.015 UF 50V
C428	C0BBB05N3K	CC 3900 PF 500V B DD312B392K500V
C429	P34104103J	CPP DTW-103J-400V 0.01 UF 400V
C430	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C431	E027T5470M	CE 50TWSS470MTA 47 UF 50V
C432	P34104103J	CPP DTW-103J-400V 0.01 UF 400V
C433	E0B701221M	CE 10TWSS221M 220 UF 10V
C434	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C435	E027T1331M	CE 10TWSS331MTA 330 UF 10V
C436	P133T0223J	CPP AMZV50V223J 0.022 UF 50V
C437	C0BBB0513K	CC 0.001 UF 500V B DD320B102K500V
C501	C02TZF4Q4Z	CC RTHE10SJZF473Z 0.047 UF
⚠ C502	E0B7F2102M	CE 1000 UF 16V SS 16TWSS1000
C503	E011T1101M	CE ECEA1AU101B 100 UF 10 V
C504	E011T1101M	CE ECEA1AU101B 100 UF 10 V
C506	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C507	E027T5100M	CE 50TWSS100MTA 10 UF 50V
C508	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C801	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C802	C02TB04S2K	CC RTHE40SJYB561K 560 PF B
C803	C02TB04Q2K	CC RTHE40SJYB471K 470 PF B
C804	E011T1101M	CE ECEA1AU101B 100 UF 10 V
C805	P133T0104J	CPP AMZV50V104J 0.1 UF 50V
C1101	C02TSL4N1K	CC RTHE40SJSL390K 39 PF SL
C1102	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1104	C02TSL4G1K	CC RTHE40SJSL180K 18 PF SL
C1105	C02TSL4E1K	CC RTHE40SJSL150K 15 PF SL
C1106	C02TSL450D	CC RTHE40SJSL050D 5 PF SL
C1107	C0BFB04Q3K	CC 4700 PF 50V B DD380B472KV50V
C1108	C0B0SH4B1J	CC DD03000SK120J2 12 PF 50V N330
C1109	C0BBCH440D	CC 4PF 50V NP0 DD330CH040D50V
C1110	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1111	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1112	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1113	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1114	C02TSL4E1K	CC RTHE40SJSL150K 15 PF SL
C1116	C0B0UJ421J	CC DD03000UJ200J2 20 PF 50V N750
C1117	P0D100331J	CST CQ09SC1H331J 330 PF 50V
C1119	E021T50R1M	CE 50TWMS0R1MTA 0.1 UF 50V
C1121	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1122	P133T0183J	CPP AMZV50V183J 0.018 UF 50V
C1124	E021T3220M	CE 25TWMS220MTA 22 UF 25V
C1125	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1126	E021T1470M	CE 10TWMS470MTA 47 UF 10V
C1127	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1128	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1129	E0B7F1471M	CE 470 UF 10V SS 10TWSS471MKC
C1130	P133T0103J	CPP AMZV50V103J 0.01 UF 50V
C1131	P133T0683J	CPP AMZV50V683J 0.068 UF 50V
C1132	P133T0562J	CPP AMZV50V562J 0.0056 UF 50V
C1133	E021T1221M	CE 10TWMS221MTA 220 UF 10V
C1134	C02TSL420D	CC RTHE40SJSL020D 2 PF SL
C1135	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1136	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1137	E021T5010M	CE 50TWMS010MTA 1 UF 50V
C1138	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION
		-CAPACITORS (CONT)-
C1139	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1140	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1141	E021T1221M	CE 10TWMS221MTA 220 UF 10V
C1142	C0B0UJ411F	CC DD03000UJ100F2 10 PF 50V N750
C1143	P0D100452J	CST 4500 PF 50V CQ09SC1H452J
C1144	C52AB01H5M	CC DSFA10VJY5U224M 0.22 UF 12V
C1145	C0B0SL441J	CC DD330SL400J50V 40 PF 50V SL
		-SEMICONDUCTORS-
D301	D93001500Y	DIODE ZENER GZA15 Y
D302	D5F00V74ET	DIODE,VARIABLE CAPACITOR 1SV74-ET
D303	D5F00V74ET	DIODE,VARIABLE CAPACITOR 1SV74-ET
D304	D5F00V74ET	DIODE,VARIABLE CAPACITOR 1SV74-ET
D305	D5F00V74ET	DIODE,VARIABLE CAPACITOR 1SV74-ET
D401	D6J0KB2620	DIODE VARISTA KB-262
D402	D0300034A0	DIODE,GERMANIUM 1N34A
D403	D0300034A0	DIODE,GERMANIUM 1N34A
D404	D0300034A0	DIODE,GERMANIUM 1N34A
D405	D25T5566G0	DIODE,RECTIFIER S5566G
D406	D120000550	DIODE,SILICON 1SS55
D407	D28000BB60	DIODE,RECTIFIER BB6
D408	D110001610	DIODE,SILICON MA161
D1101	D0J000A900	DIODE,GERMANIUM 0A-90
D1102	D13TGMA010	DIODE,SILICON GMA-01-BT
D1103	D5I0TT4100	DIODE VARIABLE CAPACITOR ITT410B
D1104	D93005R60Y	DIODE ZENER GZA5.6 Y
D1105	D13TGMA010	DIODE,SILICON GMA-01-BT
IC101	I02990574J	INTEGRATED CIRCUIT UPC574J
IC201	I01SA57100	INTEGRATED,CIRCUIT AN5710
IC202	I01SA57200	INTEGRATED,CIRCUIT AN5720
IC301	I01SB57300	INTEGRATED,CIRCUIT AN5730
IC351	I07SP05460	INTEGRATED,CIRCUIT BA546
IC501	I2MS920190	INTEGRATED CIRCUIT OEC-2019
IC1101	I07SJ44030	INTEGRATED CIRCUIT BA4403
IC1102	I07TN42340	INTEGRATED CIRCUIT BA4234L
Q401	TA3T00608F	TRANSISTOR SILICON 2SA608NPFT
Q402	TC3T0536KF	TRANSISTOR,SILICON 2SC536KNPFT
Q403	TD3000545E	TRANSISTOR,SILICON 2SD545E
Q404	TC3T0536KF	TRANSISTOR,SILICON 2SC536KNPFT
Q405	TB3000598E	TRANSISTOR,SILICON 2SB598E
Q406	TC3T0536KF	TRANSISTOR,SILICON 2SC536KNPFT
Q407	TC3T0536KF	TRANSISTOR,SILICON 2SC536KNPFT
Q408	TC10022640	TRANSISTER SILICON 2SC2264
Q501	TA1000963R	TRANSISTOR,SILICON 2SA963R
Q801	TC1001980T	TRANSISTOR,SILICON 2SC1980T
Q1101	TC3T00930D	TRANSISTOR,SILICON 2SC930NP-D-T
		- COILS & TRANSFORMERS-
L201	0331020017	COIL,VIDEO IFT 1672MM
L202	0331010017	COIL,VIDEO IFT 1715MM
L203	021765R92J	COIL,INDUCTOR R12 1876X
L204	0331090017	COIL,SOUND IFT 1716MM
L205	021765391K	COIL C8-B-391K 390 UH
L206	0331020027	COIL,VIDEO IFT 1673MM
L207	0331020027	COIL,VIDEO IFT 1673MM
L402	03305Y0037	COIL H OSC 1419MM
L403	021767101K	COIL,INDUCTOR 1414MM
L1101	0209804540	COIL,FM RF 09804540 0031KM
L1102	0301020089	COIL FM OSC OGL-0049
L1103	0306050088	COIL,FM IFT 0605008
L1104	0340B60029	COIL BAR ANTENNA 40B6002
L1105	0306160029	COIL SW OSC 0616002
L1106	0306400078	COIL,AM IFT 0640007
L1107	0306050098	COIL,FM IFT 0605009
L1108	0306260039	COIL,MW OSC 06260039 02110KM
T301	03311F0017	COIL,SOUND IFT 1675MM
T302	03311F0027	COIL,SOUND IFT 1676MM
T401	0450150021	TRANS,HORIZONAL DRIVE 1412MS
		-JACK & CONNECTORS-
J001	0626400001	JACK,ANTENNA D2-711N-01
J351	0602101002	JACK,RCA 3.5 HSJ0707-01-020
J501	0602602001	JACK,DC HEC0470-01-630
J502	063T100001	SOCKET,CHARGE 3T100001
⚠ J801	0662000001	SOCKET,CATHORD RAY TUBE NPS0050-01-010
		-SWITCHES-
SW001	0510422004	SWITCH,SLIDE SS-103-A3
SW002	0510324002	SWITCH,SLIDE HSW0477-01-020
SW101	0510334001	SWITCH,SLIDE HSW0339-01-010
SW301	0510336001	SWITCH,SLIDE HSW0622-01-030
SW501	0510422006	SWITCH,SLIDE SS-121-B3

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION	
		-SWITCHES (CONT)-	
SW1101	0510336001	SWITCH,SLIDE	HSW0622-01-030
		-SEMI-FIXED RESISTORS-	
VR101	V011015B05	VOLUME,ROTALY	EWH-4GAF15B15
VR102	V1263Q4B01	VOLUME SEMI FIXED	RHEOAS40CA (H0615C117)
VR103	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR104	V126314B01	VOLUME SEMI FIXED	RHEOA140FB (H0615C113)
VR105	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR106	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR107	V1263U4B01	VOLUME SEMI FIXED	RHEOAW40GB (H0615C118)
VR201	V126313B01	VOLUME SEMI FIXED	RHEOA130FB (H0615C107)
VR301	V1263Q4B01	VOLUME SEMI FIXED	RHEOAS40CA (H0615C117)
VR302	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR303	V1263Q4B01	VOLUME SEMI FIXED	RHEOAS40CA (H0615C117)
VR304	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR401	V1263H5B01	VOLUME SEMI FIXED	RHEOAJ50JB (H0615C121)
VR402	V1263H4B01	VOLUME SEMI FIXED	RHEOAJ40DB (H0615C115)
VR403	V126314B01	VOLUME SEMI FIXED	RHEOA140FB (H0615C113)
VR404	V1263Q3B01	VOLUME SEMI FIXED	RHEOAS30EB (H0615C111)
VR501	V126314B01	VOLUME SEMI FIXED	RHEOA140FB (H0615C113)
VR502	V176353B01	VOLUME,SEMI FIXED	RVF6P01-502N
VR801	V114C25B02	VOLUME,ROTALY	EVL-V0K15KB25
VR802	V012013C02	VOLUME,ROTARY	EVJ-ELAEA2C13
		-P.C. BOARDS-	
PCB001	13TM0075A3	PCB	TM0075A
PCB002	13PR0024B3	PCB	PR0024B3
PCB003	13TE0260A3	PCB	TE0260A
PCB004	13TE0261A3	PCB	TE0261A
		-MISCELLANEOUS-	
AD501	041E410023	AC ADAPTER	1E41002
ANT001	1255108001	ANTENNA,ROD	T-2118
CD101	068313074A	CORD EIS CONNECTOR	8313074A
CD351	068312098A	CORD EIS CONNECTOR	8312098A
CD352	0683010288	CORD CONNECTOR	8301028B
CD353	068301033A	CORD CONNECTOR	8301033A
CD401	122B031801	CORD JUMPER	2B031801
CD501	068317064A	CORD EIS CONNECTOR	8317064A
CD502	068312099A	CORD EIS CONNECTOR	8312099A
CD503	068314069B	CORD EIS CONNECTOR	8314069B
CD504	122B031202	CORD,JUMPER	2B031202
CD505	121D452401	CORD CAR BATTERY	CA-930
CF801	101214R501	FILTER,CERAMIC	TPS4.5MA1
CF802	101215R503	FILTER,CERAMIC TRAP	TPS5.5MA1
CP101	0694130019	CONNECTOR PCB SIDE	171825-3
CP201	0694130015	CONNECTOR PCB SIDE	4-171825-3
CP351	0694120016	CONNECTOR PCB SIDE	4-171825-2
CP352	0694010030	CONNECTOR PCB SIDE	171255-1
CP353	0694010030	CONNECTOR PCB SIDE	171255-1
CP501	0694170019	CONNECTOR PCB SIDE	171825-7
CP502	0694120019	CONNECTOR PCB SIDE	171825-2
CP503	0694140019	CONNECTOR PCB SIDE	171825-4
CF1101	1012510R73	FILTER,CERAMIC	SFE 10.7MA5
CF1102	1012510R73	FILTER,CERAMIC	SFE 10.7MA5
CF1103	10127R4551	FILTER,CERAMIC	SFU 455B
⚠ DY401	0271001F01	DEFLECTION YOKE	DY-110
EAR351	074F130001	EARPHONE	4F130001
⚠ F501	0802T01001	FUSE	FST 1 A (T) 250V
⚠ FB401	0420020011	TRANSFORMER,FLYBACK	FB-115
FH501	067H000001	HOLDER,FUSE	7800-6268
FH502	067H000001	HOLDER,FUSE	7800-6268
PF001	1141200001	VU-SEPARATER	EXC-UVS01
PF002	1142310502	FILTER, BAND PASS	BEF10805K
PT001	126C000004	TERMINAL,PIN	A-4646
PT002	126C000004	TERMINAL,PIN	A-4646
PT003	126C000004	TERMINAL,PIN	A-4646
PT004	126C000004	TERMINAL,PIN	A-4646
PT005	126C000004	TERMINAL,PIN	A-4646
PF1101	1145398701	FILTER,FM ANT BAND PASS	PFWE4
SP351	0701020001	SPEAKER	EAS-5P10SC
TP2	126V000005	TERMINAL PIN	IPS-2071
TP3	126V000005	TERMINAL PIN	IPS-2071
TP4	126V000005	TERMINAL PIN	IPS-2071
TP5	126V000005	TERMINAL PIN	IPS-2071
TP6	126V000005	TERMINAL PIN	IPS-2071
TP9	126V000005	TERMINAL PIN	IPS-2071
TP10	126V000005	TERMINAL PIN	IPS-2071
TP11	126V000005	TERMINAL PIN	IPS-2071
TP12	126V000005	TERMINAL PIN	IPS-2071
TP13	126V000005	TERMINAL PIN	IPS-2071
TP15	126V000005	TERMINAL PIN	IPS-2071
TH201	DS3A5G102L	THERMISTOR	SDT 100

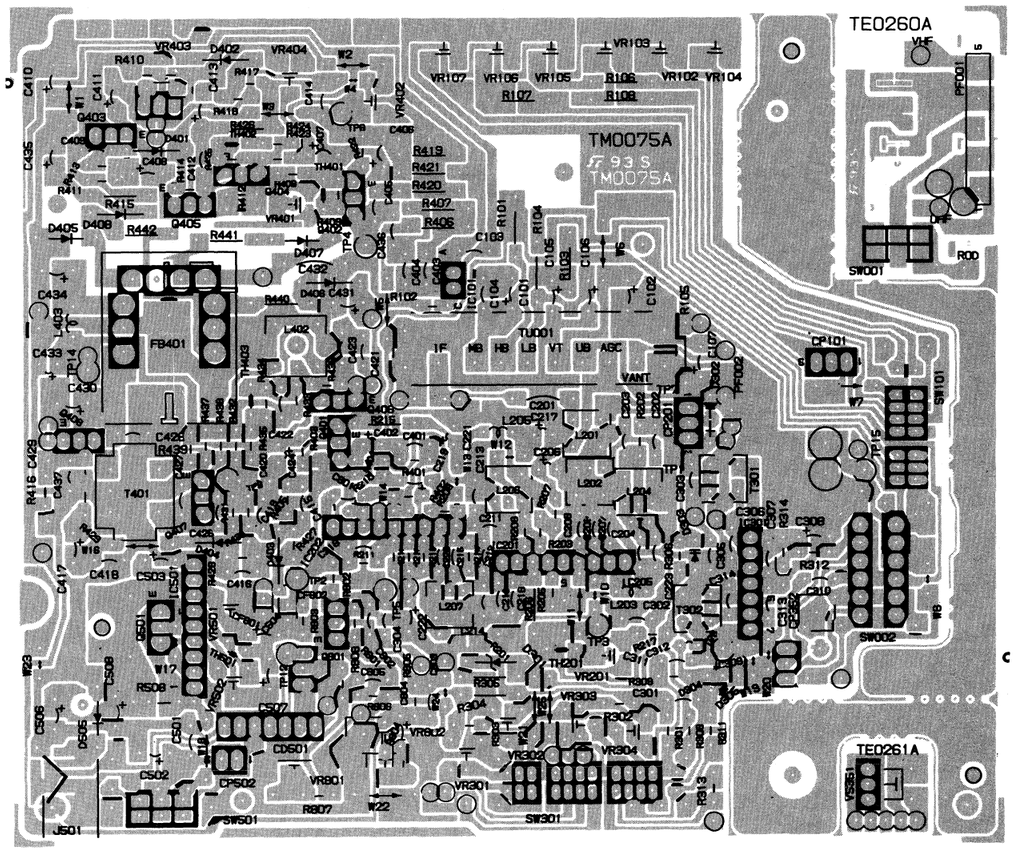
	REF.NO	PARTS.NO	DESCRIPTION	
			-MISCELLANEOUS (CONT)-	
	TH401	DS3C9E252L	THERMISTOR	SDT 250S
	TH402	DS3A5F351L	THERMISTOR	SDT 35
	TH403	DS3A5G102L	THERMISTOR	SDT 100
	TH501	DS3A5F351L	THERMISTOR	SDT 35
⚠	TU001	0135603001	TUNER,UHF-VHF TEEZ6-003A (CZE6-003)	
	TC1102	0100510003	C,CERAMIC TRIMMER	TZ03Z070E
	TC1103	0100510003	C,CERAMIC TRIMMER	TZ03Z070E
⚠	V401	09012R5101	TUBE,CATHODE RAY	60AB4
	VS351	V02A024A01	VOLUME,ROTALY RK9A11008A (K0911100D)	
	VC1101	0111812601	PVC	CJ-392-1309

AMENDMENT OF PARTS LIST

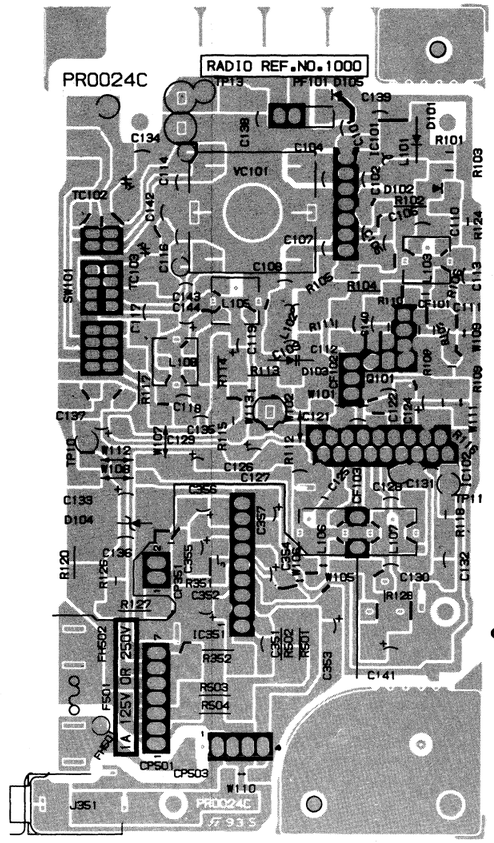
Model TVR-7120

REF.NO.	DESCRIPTION		DESCRIPTION(NEW)	PART NO.
PCB001	TM0075A		TM0075A-M	13TM0075A3-M
PCB002	PR0024B		PR0024C	13PR0024C3
R316		(ADD.)	470 ohm	R021T4471J
C209	0.04 μF 50V		0.039 μF 50V	C020F04N4Z
C210	0.04 μF 50V		0.039 μF 50V	C020F04N4Z
C305	8 PF 50V		20 PF 50V	C020CH421K
L203	R12 1876X		0.92 UH	021765R92J
TP8		(ADD.)	IPS-2071	126V000005
TP11	IPS-2071		(DEL.)	
TP14		(ADD.)	IPS-2071	126V000005

MAIN P. C. BOARD



RADIO P. C. BOARD

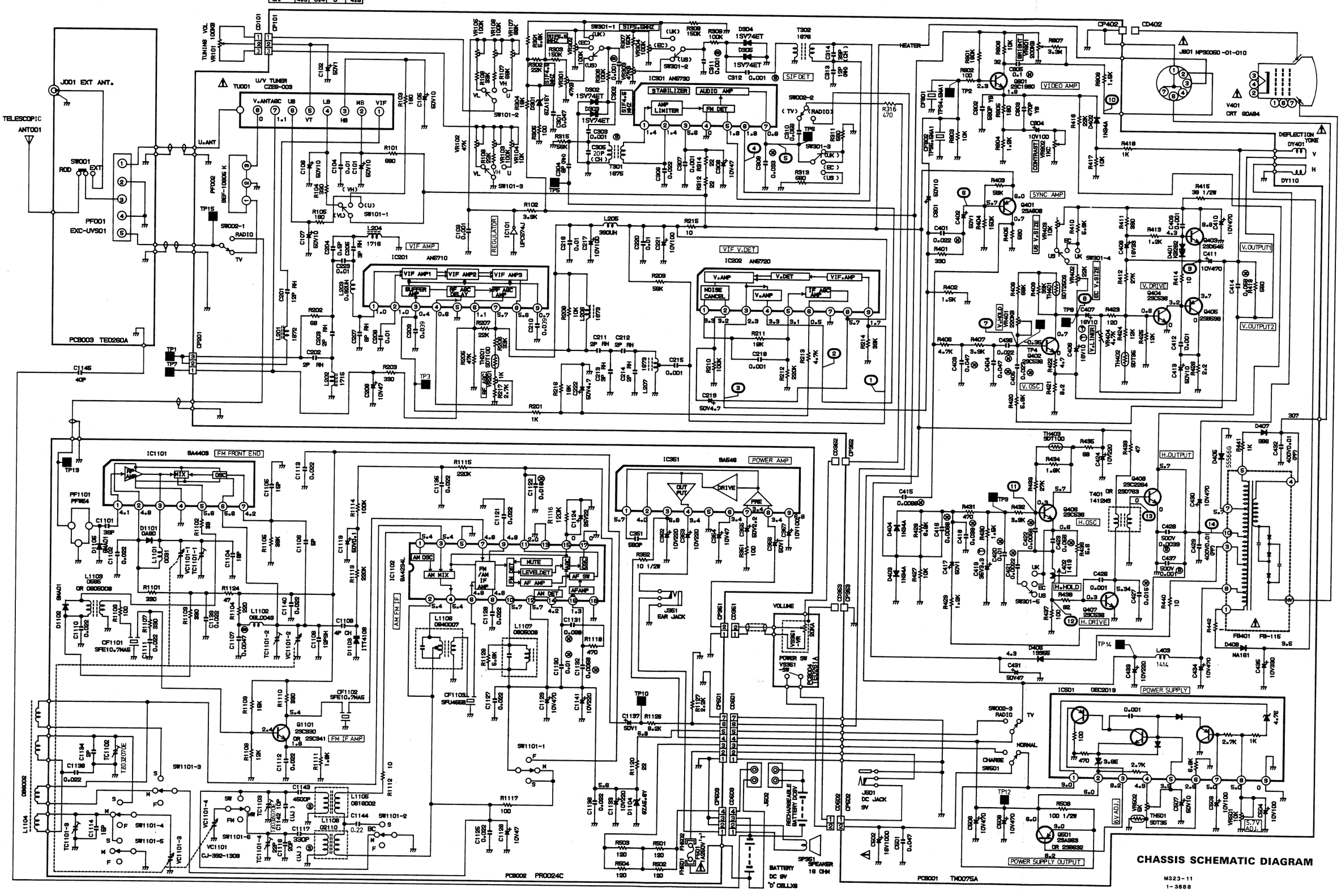


SYMBLE LIST

RESISTOR	
SEMI-FIXED RESISTOR	
CAPACITOR	
JUMPER	

CHASSIS SCHEMATIC DIAGRAM

TUNER	HB	MB	LB	UB
V.LOW	4.5	0.4	4.5	0
V.HIGH	4.5	4.5	3.9	0
UHF	4.5	0.4	0	4.5



CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CHASSIS SCHEMATIC DIAGRAM

M323-11
1-3888